

## IN THE CLAIMS

Please amend the claims to read as follows:

### Listing of Claims

1-41. (Canceled).

42. (Currently Amended) A data transmission method for use in a mobile communication system, the method comprising:

establishing [[a]] radio bearers between a mobile terminal and a radio access network of the mobile communication system,

receiving, at the mobile terminal, radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers:

(1) ~~includes~~ a priority to be assigned to a logical channel ~~that is mapped on a transport channel~~ to which the respective radio bearer is to be mapped and (2) ~~indicates~~ a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped,

mapping the radio bearers to [[the]] logical channels at the mobile terminal ~~based on~~ taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information,

multiplexing data of the logical channels to a single transport channel, and

transmitting by the mobile terminal the multiplexed data ~~[[via]] of the logical channels on~~ the transport channel.

43. (Currently Amended) The data transmission method according to claim 42, further comprising selecting by the mobile terminal a transport format combination to be used for transmitting multiplexed data based on at least the priority assigned to the logical channel.

44. (Canceled).

45. (Currently Amended) The data transmission method according to claim 43, wherein the multiplexed data is transmitted using the selected transport format combination.

46. (Currently Amended) The data transmission method according to claim 42, further comprising multiplexing ~~[[the]]~~ data of the logical channels to the transport channel based on ~~a flag set according to the indicated~~ the scheduling mode of ~~[[the]]~~ a respective logical channel and the priority assigned to ~~[[the]]~~ a respective logical channel.

47. (Currently Amended) The data transmission method according to claim 42, further comprising receiving, at the mobile terminal, the radio bearer mapping information as part of Radio Resource Control (RRC) signaling information from the radio access network ~~indicating the scheduling mode of the radio bearer~~.

48. (Canceled).

49. (Previously Presented) The data transmission method according to claim 42, wherein the data is transmitted on an enhanced dedicated uplink channel.

50. (Canceled).

51. (Previously Presented) The data transmission method according to claim 42, wherein the scheduling mode is either a time and rate controlled scheduling mode or a rate controlled scheduling mode.

52. (Canceled).

53. (Currently Amended) A mobile terminal for use in a mobile communication system, the mobile terminal comprising:

a processing unit that establishes ~~[[a]]~~ radio bearers between the mobile terminal and a radio access network,

a receiving unit that receives, from the radio access network of the mobile communication system, radio bearer mapping information ~~including~~ indicating for each of the radio bearers: (1) a priority assigned to a logical channel that is mapped on a transport channel and ~~indicating~~ (2) a scheduling mode out of plural scheduling modes of the logical channel,

a mapping unit that maps the radio bearer to the logical channels ~~based on~~ taking into account the received radio bearer mapping information, wherein said mapping unit is operable to assign to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information,

a multiplexer that multiplexes data of the logical channels to a single transport channel,  
and

a transmitting unit that transmits the multiplexed data ~~[[via]]~~ of the logical channels on  
the transport channel.

54. (Currently Amended) The mobile terminal according to claim 53, further comprising  
a selecting unit that selects a transport format combination to be used for transmitting  
multiplexed data based on at least the priority assigned to the logical channels.

55. (Canceled).

56. (Currently Amended) The mobile terminal according to claim 54, wherein the  
transmitting unit transmits the multiplexed data using the selected transport format combination.

57. (Currently Amended) The mobile terminal according to claim 53, wherein the  
~~transmitting unit multiplexes the data~~ multiplexer is operable to multiplex data of the logical  
channels to the transport channel based on ~~a flag set according to the indicated~~ the scheduling

mode of [[the]] a respective logical channel and the priority assigned to [[the]] a respective logical channel.

58. (Currently Amended) The mobile terminal according to claim 53, wherein the receiving unit receives the radio mapping information as part of Radio Resource Control (RRC) signaling information from the radio access network ~~indicating the scheduling mode of the radio bearer~~.

59. (Canceled).

60. (Currently Amended) The mobile terminal according to claim 53, wherein the transmitting unit transmits the multiplexed data on an enhanced dedicated uplink channel.

61. (Canceled).

62. (Previously Presented) The mobile terminal according to claim 53, wherein the scheduling mode is either a time and rate controlled scheduling mode or a rate controlled scheduling mode.

63. (Currently Amended) A computer readable medium storing instructions that, when executed by a processor of a mobile terminal, cause the mobile terminal to perform data transmissions, by:

establishing [[a]] radio bearers between a mobile terminal and a radio access network of a mobile communication system,

receiving, at the mobile terminal, radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers:

(1) ~~includes~~ a priority to be assigned to a logical channel that is mapped on a transport channel to which the respective radio bearer is to be mapped and (2) ~~indicates~~ a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped,

mapping the radio bearers to [[the]] logical channels based on at the mobile terminal taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information,

multiplexing data of the logical channels to a single transport channel, and

transmitting by the mobile terminal the multiplexed data [[via]] of the logical channels on the transport channel.

64. (Canceled).

65. (Canceled).

66. (New) The data transmission method according to claim 42, wherein the scheduling mode indicates whether or not the logical channel is to be considered when performing scheduling information reporting.

67. (New) The mobile terminal according to claim 53, wherein the scheduling mode indicates whether or not the logical channel is to be considered when performing scheduling information reporting.

68. (New) A data transmission method for use in a mobile communication system, the method comprising:

establishing radio bearers between a mobile terminal and a radio access network of the mobile communication system;

receiving at the mobile terminal radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers (1) a priority to be assigned to a logical channel to which the respective radio bearer is to be mapped and (2) a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped;

mapping the radio bearers to logical channels at the mobile terminal taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information;

multiplexing data of the logical channels to a single transport channel based on the scheduling mode of a respective logical channel and the priority assigned to a respective logical channel;

selecting by the mobile terminal a transport format combination to be used for transmitting the multiplexed data based on at least the priority assigned to the logical channels; and

transmitting by the mobile terminal the multiplexed data of the logical channels on the transport channel.

69. (New) A mobile terminal for use in a mobile communication system, the mobile terminal comprising:

a processing unit that establishes radio bearers between a mobile terminal and a radio access network of the mobile communication system;

a receiving unit that receives at the mobile terminal radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers (1) a priority to be assigned to a logical channel to which the respective radio bearer is to be mapped and (2) a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped;

a mapping unit that maps the radio bearers to logical channels at the mobile terminal taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the



scheduling mode indicated in the radio bearer mapping information;

    multiplexing data of the logical channels to a single transport channel based on the scheduling mode of a respective logical channel and the priority assigned to a respective logical channel;

    selecting by the mobile terminal a transport format combination to be used for transmitting the multiplexed data based on at least the priority assigned to the logical channels, and

    transmitting by the mobile terminal the multiplexed data of the logical channels on the transport channel.